Kramer Electronics, Ltd.

USER MANUAL

Model:

VA-1VGAxl

EDID Capture/Emulator

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups[1] that are clearly defined by function.

Thank you for purchasing the Kramer TOOLS **VA-1VGAxl** *EDID Capture/Emulator* which is ideal for ensuring trouble free VGA[2] transmission by capturing an EDID (Extended Display Identification Data, see Section 3.1) block from a display device or providing a built-in EDID to a video source.

Each package includes the following items:

- The **VA-1VGAxl** *EDID Capture/Emulator*
- Power adapter 5V DC
- This user manual[3]

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high-resolution cables[4]

1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

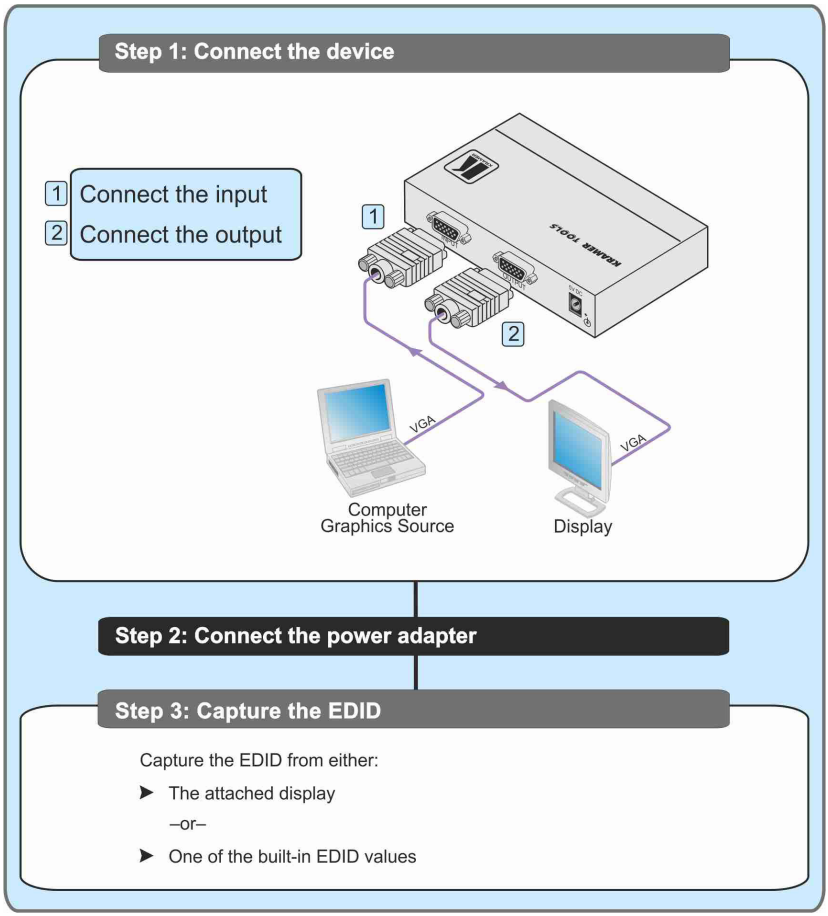
2 Up to WUXGA

3 Download up-to-date Kramer user manuals from http://www.kramerelectronics.com

4 The complete list of Kramer cables is on http://www.kramerelectronics.com

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.



3 Overview

The Kramer TOOLS **VA-1VGAxl** is a VGA EDID capture device and emulator used to read and write EDID to and from various devices.

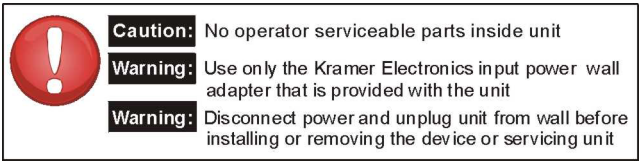
The **VA-1VGAxl** is connected to a video source and a video acceptor. The device can then provide the source with either the EDID captured from the acceptor or from one of the built-in EDID data sets. This can prevent problems where a source (for example, a PC) fails to output video because it was not connected to the video acceptor when attempting to read its EDID.

The **VA-1VGAxl** features:

- 15-pin HD connectors for input and output signals
- A CAPTURE button
- A SELECT EDID emulation rotary switch
- Visual indication of a successful/unsuccessful capture

To achieve the best performance:

- Use only good quality connection cables[1] to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your **VA-1VGAxl** away from moisture, excessive sunlight and dust


Caution: No operator serviceable parts inside unit
Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit
Warning: Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

3.1 Defining the EDID

The Extended Display Identification Data (EDID[2]) is a data-structure provided by a display to describe its capabilities to a graphics card (that is connected to the display's source). The EDID enables the product to "know" what kind of monitor is connected to the output. The EDID includes the manufacturer's name, product type, timing data supported by the display, display size, luminance data and (for digital displays only) the pixel mapping data.

1 Available from Kramer Electronics on http://www.kramerelectronics.com

2 Defined by a standard published by the Video Electronics Standards Association (VESA)

4 Defining the VA-1VGAxl EDID Capture/Emulator

Figure 1 and Table 1 define the front and rear views of the **VA-1VGAxl**.

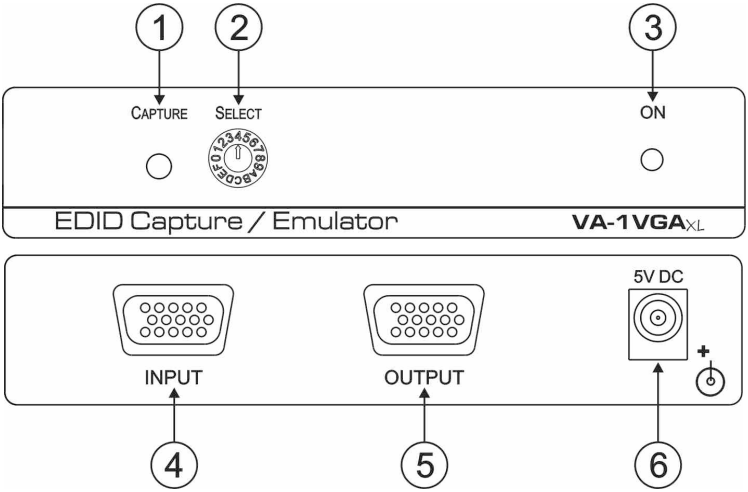


Figure 1: VA-1VGAxl EDID Capture/Emulator Front and Rear Panels

Table 1: VA-1VGAxl EDID Capture/Emulator Front and Rear Panel Features

#	Feature	Function
1	*CAPTURE* Button	Press to capture the EDID (either from an attached display or from one of the built-in emulations)
2	*SELECT* Switch	Turn to select one of the built-in EDID emulations
3	*ON* LED	Lights green when the unit receives power
4	*INPUT* 15-pin HD (F) Connector	Connect to the video source
5	*OUTPUT* 15-pin HD (F) Connector	Connect to the video acceptor
6	*5V DC* Connector	Connect to the +5V DC power adapter, center pin positive

5 Connecting the VA-1VGAxl EDID Capture/Emulator

To connect the VA-1VGAxl as illustrated in Figure 2:

1. Connect the video source (for example, a laptop) to the 15-pin HD INPUT connector on the **VA-1VGAxl** using a VGA cable[1].
2. Connect the 15-pin HD OUTPUT connector on the **VA-1VGAxl** to the video acceptor (for example, a display).

1 The EDID is carried over pins 12 and 15 of the VGA connector so the cable used must have pins 12 and 15 connected

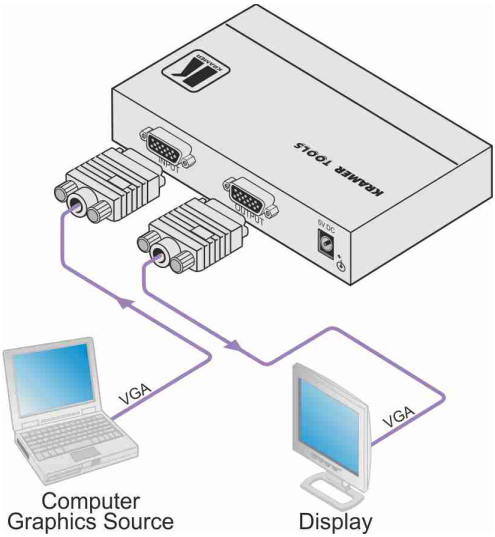


Figure 2: Connecting the VA-1VGAxl EDID Capture/Emulator

6 Capturing the EDID from a Display

The **VA-1VGAxl** can present on its input an EDID from either a display connected to the output or one of the built-in EDID values.

6.1 Capturing the EDID from a Display Device

To capture the EDID from a display device:

1. Ensure that the rotary switch is in position 0. If it is not, use a small screwdriver to turn it to 0.
2. Press the EDID capture button.
   The ON LED flashes slowly several times.
   The new EDID is captured when the LED stops flashing and lights continuously. If the LED flashes quickly a few times and then lights continuously, the EDID was not captured and the default EDID is captured.

6.2 Setting a Built-in EDID

To set a built-in EDID:

1. Using a small screwdriver, turn the rotary switch to the required position (see Table 2).

2. Press the EDID CAPTURE button.
   The ON LED flashes quickly several times.
   The new EDID is captured when the LED stops flashing and lights solid. If the LED flashes quickly a few times and then goes out, the EDID was not captured.

Table 2: Rotary Switch EDID Native Resolution Settings

Rotary Switch Position	Resolution	Refresh Rate
0 (Default)	1024x768	60Hz
1	800x600	60Hz
2	1024x768	60Hz
3	1152x864	75Hz
4	1280x720	60Hz
5	1280x800	60Hz
6	1024x1024	60Hz
7	1360x768	60Hz

Rotary Switch Position	Resolution	Refresh Rate
8	1440x900	60Hz
9	1440x1050	60Hz
A	1600x1200	60Hz
B	1680x1050	60Hz
C	1920x1080	60Hz
D	1920x1200	60Hz
E	For future use	
F	For future use	

7 Technical Specifications

Technical specifications of the **VA-1VGAxl** *EDID Capture/Emulator* are listed in Table 3.

Table 3: VA-1VGAxl EDID Capture/Emulator Technical Specifications[1]

INPUT:	1 VGA on a 15-pin HD connector (up to WUXGA)
OUTPUT:	1 VGA on a 15-pin HD connector (up to WUXGA)
CONTROLS:	Button for EDID capture Rotary switch for EDID resolution selection
POWER SOURCE:	12V DC 20mA
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)
STORAGE TEMPERATURE:	-45° to +72°C (-49° to 162°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	12.1cm x 7.7cm x 2.5cm (4.8" x 3.03" x 1") W, D, H.
WEIGHT:	0.18kg (0.4lbs) approx.
ACCESSORIES:	Power Adapter, mounting bracket
OPTIONS:	RK-3T rack mount kit

1 Specifications are subject to change without notice

8 Default EDID

Monitor
Manufacturer..... KRM
Plug and Play ID..... KRM0000
Serial number..... 2
Manufacture date..... 2009, ISO week 10

EDID revision..... 1.3
Input signal type..... Analog 0.700,0.300 (1.0V p-p)
Sync input support..... Separate
Display type..... RGB color
Screen size..... 360 x 290 mm (18.2 in)
Power management..... Standby, Suspend, Active off/sleep
Extension blocs..... None

DDC/CI..... n/a

Color characteristics
Default color space..... Non-sRGB
Display gamma..... 2.40
Red chromaticity..... Rx 0.611 - Ry 0.329
Green chromaticity..... Gx 0.312 - Gy 0.559
Blue chromaticity..... Bx 0.148 - By 0.131
White point (default).... Wx 0.320 - Wy 0.336
Additional descriptors... None

Timing characteristics
Range limits..... Not available
GTF standard..... Not supported
Additional descriptors... None
Preferred timing..... Yes
Native/preferred timing.. 1024x768p at 60Hz (4:3)
Modeline..... "1024x768" 65.000 1024 1048 1184 1344 768 771 777 806 -hsync -vsync
Detailed timing #1..... 1280x800p at 60Hz (1:1)
Modeline..... "1280x800" 71.000 1280 1328 1360 1440 800 803 809 823 +hsync -vsync
Detailed timing #2..... 1680x1050p at 60Hz (1:1)
Modeline..... "1680x1050" 119.000 1680 1728 1760 1840 1050 1053 1059 1080 +hsync -vsync
Detailed timing #3..... 1920x1200p at 60Hz (1:1)
Modeline..... "1920x1200" 154.000 1920 1968 2000 2080 1200 1203 1209 1235 +hsync -vsync

Standard timings supported
640 x 480p at 60Hz - IBM VGA
640 x 480p at 67Hz - Apple Mac II
640 x 480p at 72Hz - VESA
640 x 480p at 75Hz - VESA
800 x 600p at 56Hz - VESA
800 x 600p at 60Hz - VESA
800 x 600p at 72Hz - VESA
800 x 600p at 75Hz - VESA
1024 x 768p at 60Hz - VESA
1024 x 768p at 70Hz - VESA
1024 x 768p at 75Hz - VESA
1280 x 1024p at 75Hz - VESA
1280 x 1024p at 60Hz - VESA STD
1280 x 960p at 60Hz - VESA STD
1400 x 1050p at 60Hz - VESA STD
1440 x 900p at 60Hz - VESA STD
1600 x 1200p at 60Hz - VESA STD

Raw data
00,FF,FF,FF,FF,FF,FF,00,2E,4D,00,00,02,00,00,00,0A,13,01,03,08,24,1D,8C,EA,9C,20,9C,54,4F,8F,26,
21,52,56,3F,CF,00,81,80,81,40,90,40,95,00,A9,40,01,01,01,01,01,01,64,19,00,40,41,00,26,30,18,88,
36,00,30,E4,10,00,00,18,BC,1B,00,A0,50,20,17,30,30,20,36,00,20,20,00,00,00,1A,7C,2E,90,A0,60,1A,
1E,40,30,20,36,00,20,20,00,00,00,1A,28,3C,80,A0,70,B0,23,40,30,20,36,00,20,20,00,00,00,1A,00,1F

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
   i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   ii) Product modification, or failure to follow instructions supplied with the product
   iii) Repair or attempted repair by anyone not authorized by Kramer
   iv) Any shipment of the product (claims must be presented to the carrier)
   v) Removal or installation of the product
   vi) Any other cause, which does not relate to a product defect
   vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC* Rules and Regulations: Part 15: "Radio frequency devices Subpart B Unintentional radiators"

CAUTION!

- Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- Use the supplied DC power supply to feed power to the machine.
- Please use recommended interconnection cables to connect the machine to other components.

  * FCC and CE approved using STP cable (for twisted pair products)

For the latest information on our products and a list of Kramer distributors, visit www.kramerelectronics.com **where updates to this user manual may be found. We welcome your questions, comments, and feedback.**

Caution

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

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P/N: 2900-300011 REV 1